REMARKS

Claims 14-33 are presently in the application. Claims 1-13 have been canceled.

Claims 16 and 17 have been objected to because the examiner does not understand what is meant by the language "the ribs being disposed one above the other." Also, the drawings have been objected to because they fail to show "the ribs being disposed one above the other."

The language "disposed one above the other and" has been deleted in claims 16 and 17. Thus, withdrawal of the objections is requested.

Claims 14-17 and 24-27 have been rejected under 35 U.S.C. 102(b) as anticipated by Nagasaki et al (US 6,127,760) and claims 18-21 have been rejected under 35 U.S.C. 103(a) as unpatentable over Nagasaki et al.

In the detailed explanation of the § 103 rejection, at page 7, the examiner also refers to claims 22 and 23. Applicants have treated claims 22 and 23 as also being rejected under 35 U.S.C. 103(a) as unpatentable over Nagasaki et al. However, the examiner is requested to clarify which claims are actually rejected.

Independent claim 14 is directed to a primary element (10) for an electrical machine, comprising: a magnetically conductive body (11) assembled from laminations resting axially on one another and having a plurality of axially extending teeth (15) disposed in a star pattern ((13), a winding (12) of individual annular coils (17) which are wound separately as coil-body-less air coils and thrust radially onto the teeth, a compensation element (20) on at least one face end of the magnetically conductive body, the compensation element having a

transverse strut (201) embodied in gable-like fashion which is elastically deformable in the axial direction of the tooth and being placed onto each of the face ends, located in a transverse plane to the body axis, of the teeth, and the annular coil which is thrust onto the tooth being pressed axially onto the at least one compensation element; and a closed ring element (19) joining all the compensation elements together to make a compensation mask (18).

The record of this application shows that there are a number of known processes for providing a stator winding in an electrical machine. Nagasaki et al teaches that the coils may be wound directly on the teeth of the stator core. Applicants' specification teaches that the coils may be produced by winding the coils onto coil bodies and then the coils and core bodies are thrust radially onto the teeth of the stator star or the coils may be produced in coil-body-less fashion, as so-called "air windings," and then placed in the same way on the teeth of the stator star as coils wound onto coil bodies. Of these three processes, "air windings" simplify the winding process and make a higher slot fill factor possible in the slots of the stator that are enclosed by the teeth.

The disadvantage of "air windings" is that in order to hold the annular coils nondisplaceably on the teeth in the axial and radial directions, close tolerances with regard to the internal dimensions of the annular coils, the so-called window of the annular coils, and the height of the packet forming the stator star must be adhered to both in production of the annular coils and in packeting the stator star.

The applicants' invention solves this problem by the use of at least one compensation mask, placed on one and preferably both face ends of the magnetically conductive body, which mask with its compensation elements covers the face ends of the teeth. The annular coils are axially nondisplaceably fixed on the teeth without having to maintain close tolerances between the window dimensions of the annular coils and the packet height of the magnetically conductive body. The tolerance compensation for a firm seat of the annular coils on the teeth is accomplished by means of the spring travel of the axially elastically deforming compensation elements, which are axially compressed more or less severely as they are placed on the annular coils. At the same time, by means of the compensation elements, an electrical insulation of the coil heads of the annular coils from the teeth and protection of the annular coils against mechanical damage from the tooth edges are accomplished.

Nagasaki et al is not relevant to the problem being solved by the applicants' invention, because in Nagasaki et al, the coils are wound directly on the stator teeth. Thus, the problems associated with "air coils" are not present in Nagasaki et al.

Special attention is directed to the language of claim 14 that requires "a winding of individual annular coils which are wound separately as coil-body-less air coils and thrust radially onto the teeth" and "the annular coil which is thrust onto the tooth being pressed axially onto the at least one compensation element."

The examiner describes Nagasaki et al as teaching "a winding of individual annular coils which are wound separately as coil-body-less air coils and thrust radially onto the teeth"

and cites col. 1, ll. 31-37 for support. This finding of fact by the examiner is clearly erroneous.

Col. 1, ll. 31-37, cited for support by the examiner, is actually evidence that the coils in Nagasaki et al are wound on teeth of the stator core, not as individual annular coils which are wound separately as coil-body-less air coils and then thrust radially onto the teeth as the examiner has found. Col. 1, ll. 31-37 teach that:

> An automatic winding machine is usually used to wind coils on the respective teeth of the stator core for the DC motor. Guide members referred to as "formers" are reciprocally moved lengthwise with respect to each tooth so that a wire, namely, a magnet wire is guided to be moved for every one turn pitch. Thus, each coil is formed into a predetermined shape. (Emphasis added)

Thus, contrary to what the examiner has found, Nagasaki et al actually teaches that the coils 13, 14, 15 are wound directly on the teeth (see, also, col. 5, ll. 62, 63; and col. 6, ll. 13, 14 and ll. 30, 31) with the end plates 8 and 9 disposed between the coils and the teeth 3, 4.

Attention is also directed to the language "the annular coil . . . being pressed axially onto the at least one compensation element" and "the annular coil which is thrust onto the tooth being pressed axially onto the at least one compensation element." In Nagasaki et al, the windings are wound directly on the teeth 3, 4. There is no teaching in Nagasaki et al that the coils are "pressed axially" onto the end plates 8 and 9, which the examiner construes as the applicants' claimed compensation element.

To further distinguish applicants' invention from that taught by Nagasaki et al, the structure of applicants' compensation element has been further defined in claim 14.

Applicants' specification describes and the drawings illustrate that the compensation element 20 is U-shaped, with a transverse strut 201 embodied in gabled fashion and two legs 202 of the U that extend in one piece from the transverse strut 201. See, applicants' spec., para. 25. The transverse struts provide applicants' compensation element with the ability to deform in the axial direction of the tooth as the coils are thrust onto the teeth.

The language "having a transverse strut embodied in gable-like fashion" was previously presented in claim 18. In the last Office action, the examiner admits that Nagasaki et al does not teach "the shape and size of the struts to be in the shape of a gable" (rejection, p. 6). Thus, the § 102 rejection is now moot.

In the rejections, the examiner reads the claimed "compensation element" on the insulating end plates 8 and 9 of the reference (see col. 5, ll. 13-61 for a description of the plates 8 and 9). The sole purpose of the end plates 8 and 9 is to insulate the teeth 3, 4 of the yoke 2 from the coils 13, 14, 15.

The claim language clearly distinguishes applicants' "compensation element" from that taught in Nagasaki et al. First, the end plates 8 and 9 in Nagasaki et al are individually u-shaped (see Fig. 5 of Nagasaki et al), but not in the shape of a gable, as required by the claims. As can be seen clearly in applicants' Fig. 4, when compensation elements 20 are mounted on the teeth 15, there is a spring travel s between the face end 153 of the tooth 15 and the gable-like transverse strut 201 of the compensation element 20, by the length of which the compensation element 20 can be pressed inward elastically in the axial direction of the teeth 15. This spring travels determines the tolerance range that the compensation mask

18 is capable of compensating for relative to the length of the teeth 15, or in other words the packet height of the stator star 13. It is the transverse struts embodied in gable-like fashion that provide the applicants' compensation element with the ability to deform in the axial direction of the teeth, as required by the language of the claims. The end plates 8 and 9 in Nagasaki et al are not provided with transverse struts or transverse struts embodied in gable-like fashion and they are not "elastically deformable in the axial direction of the tooth." Thus, Nagasaki et al does not anticipate or rendered obvious the subject matter of claims 14-33.

Claims 22 and 23 are even more specific than claim 14 and require that the gable-like transverse strut comprises two faces forming a ridge such that between the gable faces and the face end of the tooth, a spring travel is present for resilient retraction of the transverse strut. Nagasaki et al does not teach or suggest this structure.

Claims 28-32 have been rejected under 35 U.S.C. 103(a) as unpatentable over Nagasaki et al in view of Uchida et al (US 5,763,978) and claim 33 has been rejected under 35 U.S.C. 103(a) as unpatentable over Nagasaki et al in view of Hsu (US 6,400,059).

Neither Uchida et al nor Hsu teaches a compensation element on at least one face end of a magnetically conductive body, the compensation element having a transverse strut embodied in gabled fashion.

Thus, even if it had been obvious to one of ordinary skill to combine the teachings of Nagasaki et al and Uchida et al or the teachings of Nagasaki and Hsu, one of ordinary skill in

the art would not have obtained a primary element which included all of the claimed limitations set forth in claims 28-33.

Please charge the fee for any necessary extension of time to deposit account No. 07-2100.

Entry of the amendment and allowance of the application are respectfully requested.

Respectfully submitted,

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